

Alocasia hypnosa (Araceae), a new species from Yunnan, China

Yue-Hua Wang¹, Jian-Tao Yin^{1,2,*} & Zai-Fu Xu²

¹⁾ Department of Biology, Yunnan University, Kunming 650091, Yunnan, People's Republic of China

²⁾ Xishungbanna Tropical Botanical Garden, Chinese Academy of Sciences, Mengla, Mengla 666303, Xishuangbanna, Yunnan, People's Republic of China (*e-mail: jtyin76@yahoo.com.cn)

Received 10 Jan. 2005, revised version received 25 Mar. 2005, accepted 26 May 2005

Wang, Y. H., Yin, J. T. & Xu, Z. F. 2005: *Alocasia hypnosa* (Araceae), a new species from Yunnan, China. — *Ann. Bot. Fennici* 42: 395–398.

Alocasia hypnosa J.T. Yin, Y.H. Wang & Z.F. Xu is described and illustrated as a new species of Araceae from southern Yunnan, China. It occurs also in Thailand. The morphological characters of *A. hypnosa* and the related species *A. odora* are compared. *Alocasia hypnosa* differs from *A. odora* in its purple spathe lamina, tubercle-bearing stolons and seasonally dormant habit. An identification key to the Chinese species of *Alocasia* is provided.

Key words: *Alocasia hypnosa*, Araceae, China, new species, Yunnan

Alocasia (Araceae) is a genus of about 90 species, distributed in tropical and subtropical Asia from India to Taiwan and New Guinea, with the center of distribution in central Malasia. Including that described here there are five species in China, the other four being *A. cucullata* (Lour.) G. Don, *A. odora* (Lindl.) K. Koch, *A. longiloba* Miq. and *A. hainanensis* K. Krause (Dortort & Thompson 1979, Li 1979, Burnett 1984, Hay & Wise 1991, Mayo *et al.* 1997, Hay 1998, Li *et al.* 1998, 1999).

During our study on the tropical plant resources in South Yunnan, a new species of *Alocasia* was collected and introduced into cultivation at Xishungbanna Tropical Botanical Garden, Chinese Academy of Sciences.

Key to the Chinese species of *Alocasia*

1. Evergreen plants; stolons lacking 2

1. Seasonally dormant plants; stolons with tubercles *A. hypnosa*
2. Aerial stem branched *A. cucullata*
2. Aerial stem unbranched 3
3. Leaf blade long-sagittate, posterior lobes triangular-elongated, cuspidate at top, equal or longer than previous lobe *A. longiloba*
3. Leaf blade sagittate-ovate, posterior lobes round, ovate or truncate at top, shorter than previous lobe 4
4. Plants large herbs; petiole up to 150 cm long; leaf blade 80–130 cm long, 80–100 cm wide; appendix conic, 3–5.5 cm long, fragrant *A. odora*
4. Plants medium-sized herbs; petiole 28–30 cm long; leaf blade 25 cm long, 13 cm wide; appendix narrowly conic, 1.1 cm long *A. hainanensis*

Alocasia hypnosa J.T. Yin, Y.H. Wang & Z.F. Xu, *sp. nova* (Fig. 1)

Haec species Alocasia odorae affinis, sed ab eo laminis spathae purpureae et stolonibus 56–110 cm longis differt.

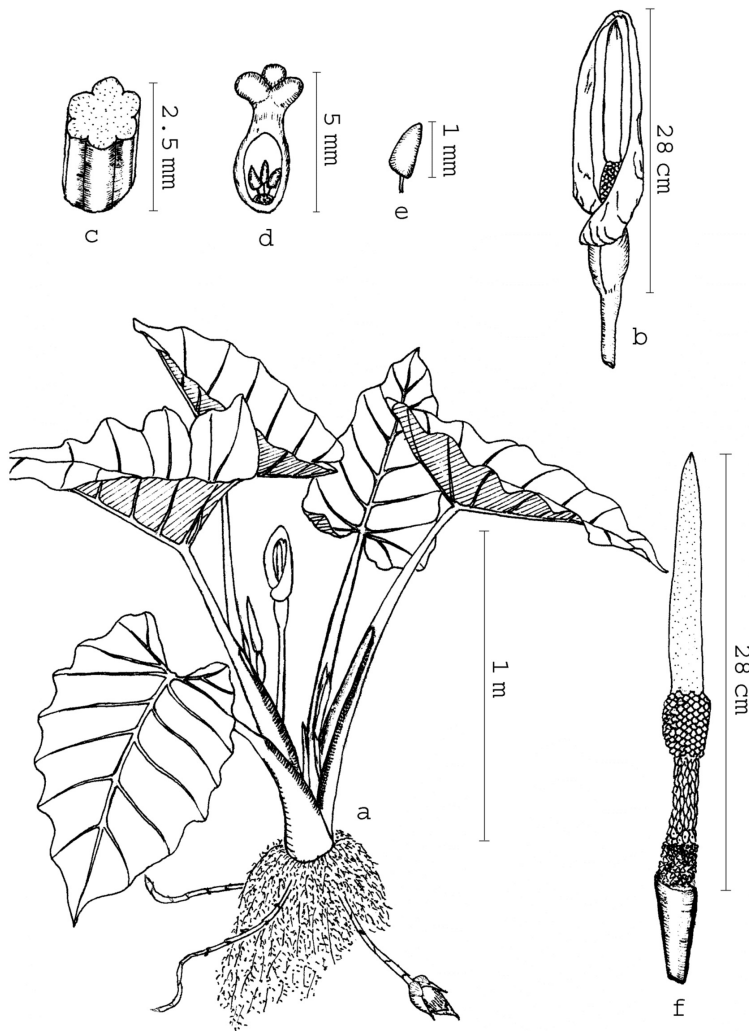


Fig. 1. *Alocasia hypnosa* (from holotype, drawn by Wen Huang). — **a:** Flowering plant. — **b:** Inflorescence. — **c:** Synandrium. — **d:** Longitudinal section of ovary. — **e:** Enlargement of an ovule. — **f:** Spadix.

TYPE: China. Yunnan Province, Menglian County, by Nanlei River, limestone mountain margin, alt. 975 m, 12.VIII. 2004 Yin Jian-Tao 816 (holotype HITBC).

Terrestrial seasonally dormant herbs with an erect rhizome and numerous stolons and tubercles. Rhizome 10 cm long, 13.5 cm in diam.; stolons (stoloniferous runners) several per plant, simple, trailing horizontally, thin, pale green, 56–110 cm long, internodes cylindric, 5.5 cm long, up to 1 cm in diam., carrying light green cataphylls; tubercles pale green, up to 4 cm long, 3 cm in diam; roots whitish, dense, 30–60 cm long, 1–2 mm in diam. Leaves 3–6 per plant; petiole cylindric, light greenish, glossy, up to 104 cm long, 3–7.5 cm in diam.; sheath 50 cm long; leaf blade triangular-sagittate, basal lobes

without sinistral connection, membranaceous, up to 82 cm long, 64 cm wide, glossy green; primary lateral veins pinnate, 8 pairs per side, conspicuous; marginal vein 2 mm remote from margin, inconspicuous. Inflorescences 2–3 appearing with leaves, slightly sweetly fragrant; peduncle cylindrical, pale green, up to 90 cm long, shorter than petiole. Spathe constricted between lower convolute part and blade, up to 28 cm long; lower spathe nearly fusiform with convolute margins, greenish, up to 6.5 cm long, 3 cm in diam.; spathe lamina oblong-lanceolate, purple, up to 24 cm long and 20 cm wide (flattened), erect at anthesis. Spadix sessile, shorter than spathe; female zone green, cylindrical, 1.5 cm long, 2 cm in diam., separated from male by a white narrower zone of sterile male flowers;

Table 1. Morphological comparison of *Alocasia hypnosa* and *A. odora*.

| Characters | <i>Alocasia hypnosa</i> | <i>Alocasia odora</i> |
|----------------------|--|---|
| Rhizome | 10 cm long, 13.5 cm in diam. | 10–100 cm long, 5–18 cm in diam. |
| Stolon | 3, pale green, 56–110 cm long | none |
| Petiole | cylindric, 50–110 cm long | cylindric, 60–160 cm long |
| Blade | triangular-sagittate, 40–80 cm long, 25–64 cm wide, basal lobes without sinal connection | sagittate-ovate, 40–100 cm long, 30–80 cm wide, basal lobes with connection |
| Primary lateral vein | 8–9 pairs | 6–13 pairs |
| Peduncle | 50–90 cm long | 50–70 cm long |
| Spathe tube | 4–6.5 cm long, 2–3 cm in diam. | 3–5 cm long, 4 cm in diam. |
| Spathe lamina | purple, 24 cm long, 20 cm wide | pale green, 20–30 cm long, 5–8 cm wide |
| Female zone | 1.5 cm long, 2 cm in diam. | 3–4 cm long, 2 cm in diam. |
| Male zone | 2–3.5 cm long, 1.5–2 cm in diam. | 3–7 cm long, 1.5–2 cm in diam. |
| Appendix | 13–16.5 cm long, 2.5 cm in diam. | 3–5.5 cm long, 1–2 cm in diam. |
| Male flower | synandria 5–6 androus | synandria 4–6 androus |
| Femal flower | stigma distinctly 3–4-lobed | stigma depressed-capitate |
| Sterile zone | 5.5 cm long | 5–6 cm long |
| Habitat | at humid edges of and in exposed areas of forest regrowth of limestone mountain, alt. 800–1000 m | in humid dense forest, alt. 200–1100 m |
| Distribution | S Yunnan, China: Lancang Thailand | China: Sichuan, Guizhou, Hunan, Jiangxi, Yunnan, Fujian, Guangdong, Guangxi |

male zone white, cylindrical, 3.5 cm long, 2 cm in diam.; sterile zone between female and male zones cylindrical, 5.5 cm long, 1–1.5 cm in diam.; appendix white, elongate-conic, up to 16.5 cm long, 2.5 cm in diam. Male flower: 5–6-androus, stamens connate into truncate synandrium, thecae lateral, oblong-lineal, dehiscing by apical pore. Synandrodies depressed, apex nearly truncate or concave, oblong to ovate. Female flower: ovary oblong, 5 mm long, unilocular, ovules 3, placentation basal, stylar region short, stigma 3–4-lobed. Immature fruit green, ripe fruit scarlet. Flowering June to August.

DISTRIBUTION AND HABITAT: China. Yunnan province: Menglian County, Lancang Prefecture. N Thailand. Chaing Rai Province (P. Boyce pers. obs.); Lao P.D.R., Muangxai Province (P. Boyce pers. obs.). *Alocasia hypnosa* grows along humid edges and in exposed areas of forest regrowth of karst limestone mountains at 970 m. Other aroids in the same habitat include *Colocasia lihengiae*, *C. gigantea*, *Alocasia odora* and the lianescent aroid *R. decursiva*.

After detailed studies, we believe that *Alocasia hypnosa* is closest to *Alocasia odora*. However, the former can be easily distinguished by the purple spathe lamina, triangular-sagittate leaves, and tubercle stolons. A closer comparison is presented in Table 1.

Acknowledgements

The field expedition to the Menglian County was supported by the Chinese Academy of Sciences (the Conservation and Study of Tropical Plant Resources Project and grant number 2000WK-7). The authors are grateful to Dr. Peter Boyce and Dr. Du Nguyen for their comments and help in preparing the manuscript. We also thank our colleague Mr. Wen Huang for preparing the illustration.

References

- Burnett, D. 1984: The cultivated *Alocasia*. — *Aroideana* 7: 67–163.
- Dortort, F. & Thompson, T. 1979: *Alocasias*. — *Aroideana* 2(2): 35–51.

- Hay, A. 1998: The genus *Alocasia* (Araceae–Colocasieae) in West Malesia and Sulawesi. — *Gardens' Bull. Singapore* 50: 221–334.
- Hay, A. 1999: The genus *Alocasia* (Araceae–Colocasieae) in the Philippines. — *Gardens' Bull. Singapore* 51: 1–41.
- Hay, A. & Wise, R. 1991: The genus *Alocasia* (Araceae) in Australasia. — *Blumea* 35: 499–545.
- Li, H. 1979: Araceae, Lemnaceae. — In: Wu, Z. Y. & Li, H. (eds.), *Flora Reipublicae Popularis Sinicae* 13(2): 67–74. Sci. Press, Beijing.
- Li, H. & Long, C. L. 1998: A primary revision of Araceae in China. — *Acta Bot. Yunnanica*, Suppl. X: 12–23.
- Mayo, S. J., Bogner, J. & Boyce, P. C. 1997: *The genera of Araceae*. — Royal Bot. Gardens, Kew.